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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,688	01/24/2006	Kenjiro Miyano	NAII127017	2402
26389 7590 10/31/2007 CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC 1420 FIFTH AVENUE			EXAMINER	
			BUI PHO, PASCAL M	
SUITE 2800 SEATTLE, WA 98101-2347		. ART UNIT	PAPER NUMBER	
•	,		2878	
			C-70-0-	
		,	MAIL DATE	DELIVERY MODE
			10/31/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

·	Application No.	Applicant(s)				
	10/565,688	MIYANO ET AL.				
Office Action Summary	Examiner	Art Unit				
	Pascal M. Bui-Pho	2878				
The MAILING DATE of this communication app Period for Reply	pears on the cover sheet with the	e correspondence address				
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING D. - Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period of Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be will apply and will expire SIX (6) MONTHS from a cause the application to become ABANDO	ON. timely filed om the mailing date of this communication. NED (35 U.S.C. § 133).				
Status						
1) Responsive to communication(s) filed on <u>09 A</u>	<u>ugust 2007</u> .					
2a)⊠ This action is FINAL . 2b)☐ This	This action is FINAL . 2b) This action is non-final.					
	Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
closed in accordance with the practice under E	Ex parte Quayle, 1935 C.D. 11,	453 O.G. 213.				
Disposition of Claims						
 4) Claim(s) 1-8 is/are pending in the application. 4a) Of the above claim(s) is/are withdraw 5) Claim(s) is/are allowed. 6) Claim(s) 1-8 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/o 						
Application Papers						
9) ☑ The specification is objected to by the Examine 10) ☑ The drawing(s) filed on 09 August 2007 is/are: Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct 11) ☐ The oath or declaration is objected to by the Example 2007.	a) \square accepted or b) \square objected drawing(s) be held in abeyance. Stion is required if the drawing(s) is	See 37 CFR 1.85(a). objected to. See 37 CFR 1.121(d).				
Priority under 35 U.S.C. § 119						
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received.						
Attachment(s)	•					
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	4) Interview Summa Paper No(s)/Mail 5) Notice of Informa 6) Other:					

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DETAILED ACTION

This Office action is responsive to communications filed on 09 August 2007. Presently, claims 1-8 remain pending.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The mere duplication of a claim preamble is herein not sufficient.

Drawings

3. The drawings were received on 09 August 2007. These drawings are acceptable.

Claim Rejections - 35 USC § 103

- 4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 5. <u>Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Theodore et</u> al. (US 5,338,932) in view of Yasutake (US 5,324,935).

With regards to claims 1-3 and 5-7, Theodore et al. disclose in Fig. 1 a scanning probe microscope comprising: a cantilever (12) with a tip probe (14) fitted at an end thereof; a light-emitting section (26); and a light-receiving section (27), the light-emitting section comprising a

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laser light-emitting element (Column 3, lines 21-24), wherein light irradiates from the lightemitting section towards the surface of the cantilever at an oblique angle, the light receiving section comprising a photodiode light-receiving element wherein light reflected by the surface of the cantilever at an oblique angle guides the light towards the light receiving element (Column 3, lines 26-29). Theodore et al. however lack an inclusion of an input optical fiber to irradiate light from the light-emitting section towards the surface of the cantilever and an output optical fiber to receive light reflected by the surface of the cantilever and guiding the light towards the light receiving element. In an analogous field of endeavor, Yasutake discloses in Fig. 1 a scanning probe microscope comprising: a cantilever (2) with a tip probe (30) fitted at an end thereof; a light-emitting section (6); and a light receiving section (8), the light-emitting section comprising a laser diode (Column 5, lines 60-61) and an input optical fiber waveguide (7), wherein the input waveguide irradiates light from the light-emitting section towards the surface of the cantilever. the light receiving section comprising a plurality of output optical fiber waveguides (Column 4, lines 36-47) and photodiodes (8a, 8b), and the output waveguides guide light reflected by the surface towards the photodiodes. Selecting known available means to reduce light loss would have been obvious to one of ordinary skill in the art. Accordingly, at the time of the invention, it would have been obvious to provide input and output optical fiber waveguides, as taught by Yasutake, in order to provide more accurate and reliable sensing results.

With regards to claim 4, Theodore et al. and Yasutake disclose a scanning microscope as claimed, but lack a clear disclosure of optics having substantially spherical-shaped lenses with substantially flat facing surfaces adjacent each other. Selecting known available optics to provide greater control of light modulation would have been obvious to one of ordinary skill in

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the art. Accordingly, at the time of the invention, it would have been obvious to modify

Theodore et al. and Yasutake by incorporating spherical-shaped lenses with flat facing surfaces
adjacent each other in order to reduce light loss and acquire more reliable sensing results.

With regards to claim 8, Theodore et al. and Yasutake disclose a scanning microscope comprising, among other features, input and output waveguides (7, Column 4, lines 36-47 of Yasutake), but lack a clear disclosure of said waveguides being separated. Providing separate input and output waveguides in order to reduce light interference would have been obvious to one of ordinary skill in the art. Accordingly, at the time of the invention, it would have been obvious to modify Theodore et al. and Yasutake by utilizing separate input and output optical fibers in order to provide more reliable sensing results.

Response to Arguments

6. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Telephone/Fax Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pascal M. Bui-Pho whose telephone number is (571) 272-2714. The examiner can normally be reached on Monday through Friday: 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pascal M. Bui-Pho Examiner, Art Unit 2878 25 October 2007

Georgia Epps
Supervisory Patent Examiner

Technology Center 2800